

RepositoriUM - The implementation of an institutional repository

2nd Congress about free software in libraries

Miguel Ferreira

mferreira@dsi.uminho.pt

Department of Information Systems

Eloy Rodrigues

eloy@sdum.uminho.pt

Documentation Services

Extended abstract

Institutional repositories may be defined as information systems capable of storing, preserving and providing access to the intellectual output produced by the members of a given institution. Within the specific context of a university, an institutional repository may contribute to increase its visibility and significance within academia as it concentrates and promotes the results of research activities carried out in the organisation. Additionally, an institutional repository nourishes the ideal of an “institutional memory” by managing and preserving relevant informational items that otherwise would remain scattered, unattended or inaccessible.

Closely related to concept of an institutional repository is the Open Access movement. Open Access means free online access to digital scholarly material – primarily peer-reviewed research papers, but extending also to other digital content that authors wish to make freely available to all users online [1]. Institutional repositories are considered the prime vehicle for the promotion and dissemination of such material.

The Documentation Services of the University of Minho (SDUM) [2] have embraced the Open Access initiative with incommensurable passion and engaged in the implementation and promotion of its own institutional repository, self-archiving policies and incentives. These were not only promoted within our institution, but also throughout the world [3-6].

The implementation the University of Minho’s institutional repository (i.e. RepositoriUM) has begun as early as 2003 with the translation and installation of a DSpace instance. The implementation of RepositoriUM was executed within the e-U programme, an initiative of the Portuguese government that aimed at building an infrastructure of services, applications and communication networks to facilitate the production and interchange of knowledge among college students and teachers throughout Portuguese universities.

The Documentation Services of the University of Minho have set upon them selves the strategic goal of implementing and populating its repository as a way to promote the university and raise the visibility of the research work carried out in doors.

The implementation of the RepositoriUM was preceded by an evaluation of several open-source platforms considered adequate for the implementation of institutional repositories, such as DSpace, Eprints or Fedora. The final choice rested on DSpace due to its friendly interface, engaged community and state-of-the-art technologies (e.g. Java, PostgreSQL, OAI-PMH).

DSpace is an open-source software which provides the tools for management of digital assets, and is commonly used as the basis for an institutional repository. It is also intended as a platform for Digital preservation activities. Since its release in 2002, as a product of the HP-MIT Alliance, it has been installed and is in production at over 100 institutions around the globe, from large universities to small higher education colleges and research centres [7].

The implementation process of the RepositoriUM comprised several stages:

It begun in July 2003 with the translation into Portuguese of the DSpace platform, followed by its branding, configuration and installation.

In a second stage, several graduated PhD and MSc students were invited to deposit their thesis together with an authorisation for publication. The idea behind this initiative was to instigate the population the repository, so that it would contain at least a few hundred items before going public. At this stage, members from six pilot communities from the University of Minho were also invited to contribute with conference papers, journal articles, grey literature and other sorts of material that people felt important to preserve and provide access to. Four of the invited communities kindly accepted the invitation and provided content to the repository. The remaining two, failed to deliver any resources.

On November 2003 the repository was made public with a total of 280 documents. To highlight the fact, a ceremony and a press conference were held at the University of Minho. Both events were endorsed by presence of university's dean.

In January 2004 the RepositoriUM was opened to the whole community and a general call for deposit was sent to person in the academy.

By the end of 2004 the number of documents in the repository rounded 630. It was felt that the numerous calls for deposit were not producing the expected results. The rate of self-archiving documents was still remarkably low. Of the 630 documents in the repository, only a mere 128 were archived by the authors them-selves.

To further stimulate the deposit of documents, the University of Minho has issued an official self-archiving policy that, in its essence, ruled the following three statements:

1. All the teachers and researchers of the University of Minho, these being authors or co-authors of any type of published work, should deposit those resources in the institutional repository of the University of Minho granting permission for dissemination in Open Access;

2. All the organic units of the University of Minho should subscribe or adopt self-archiving policies for their own research output;
3. All authors of thesis and dissertations approved by the University of Minho should authorise their deposit and dissemination through the institutional repository.

In order to make sure that the recently created policy was understood and applied by all stakeholders, the dean has defined a financial incentive of 100.000 euros, to be distributed by organic units that during 2005 would deposit the highest number of documents in the RepositoriUM. For the purpose of this evaluation, journal and peer-reviewed conference papers would rate higher than all other types of documents.

The results of this initiative were visible immediately. As of April 2005 (a mere 4 months after the introduction of the financial incentive), more than 1200 new documents have been submitted to the repository (983 of these were deposited by the authors them-selves). By the end of 2005 there were 3105 documents in the repository. During 2006 the dean has kindly offered an additional 30.000 euros to encourage self-archiving, which resulted in a total of 4900 documents by the end of the year.

Together with the evangelisation of Open Access and the endorsement of DSpace as powerful platform for the implementation of institutional repositories, the University of Minho has been involved in the development of add-ons for DSpace. Among the most noteworthy are the following:

- Statistics add-on – generates various access and download reports.
- Request copy add-on – enables universities to implement Steven Harnad's self-archiving policy in DSpace repositories. Basically, it works by sending an e-mail to the author of a document requesting a copy of the item that is not publicly available in the repository (i.e. not in Open Access).
- Controlled Vocabulary add-on - allows the user to choose from a predefined taxonomy of keywords to describe items of information while they are being submitted to the repository. That same taxonomy is subsequently used to navigate and find items in the repository [8].
- Commenting add-on – allows users to append comments to documents in the repository [9].
- Recommendation add-on – provides recommendations of items related to the document currently being visualised [9].
- Web of communication add-on – draws an interconnected network of all the items in the repository highlighting their interactions at the informal communication level (e.g. comments, downloads, etc.) [9].

In this communication we will describe in detail all of the initiatives previously outlined in this short paper as well as provide a glance on the most noteworthy features of the DSpace platform.

References

- [1] Wikipedia contributors, "Open access," in Wikipedia, The Free Encyclopedia, 2007. [Online]. Available: http://en.wikipedia.org/w/index.php?title=Open_access&oldid=103783678.
- [2] University of Minho, "Serviços de Documentação da Universidade do Minho Web site," 2007. [Online]. Available: <http://www.sdum.uminho.pt>.
- [3] E. Rodrigues, M. Almeida, Â. Miranda, A. X. Guimarães and D. Castro, "RepositóriUM : criação e desenvolvimento do Repositório Institucional da Universidade do Minho," presented at Congresso nacional de bibliotecários, arquivistas e documentalistas, Estoril, Portugal, 2004.
- [4] E. Rodrigues, "Concretizando o acesso livre à literatura científica : o repositório institucional e a política de auto-arquivo da Universidade do Minho," *Cadernos BAD*, vol. 21, no. 33, 2005.
- [5] E. Rodrigues, A. A. Baptista, I. Ramos and M. F. Sarmiento e Souza, "RepositóriUM : implementing DSpace in portuguese : lessons for the future and research pathways," presented at ICCC International Conference on Electronic Publishing, Brasília, Brazil, 2004.
- [6] E. Rodrigues, "RepositóriUM: repositório institucional da Universidade do Minho," presented at Congresso Brasileiro de Ciências da Comunicação, Porto Alegre, Brazil, 2004.
- [7] W. contributors, "DSpace," 2007. [Online]. Available: <http://en.wikipedia.org/w/index.php?title=DSpace&oldid=100210299>.
- [8] M. Ferreira and A. A. Baptista, "The use of Taxonomies as a way to achieve Interoperability and improved Resource Discovery in DSpace-based Repositories," presented at XATA - XML: Aplicações e Tecnologias Associadas, Vila Verde, Braga, Portugal, 2005.
- [9] M. Ferreira and A. A. Baptista, "DSpace-Dev @ University of Minho - Development of tools and add-ons for the DSpace platform," presented at DSpace Federation 2nd User Group meeting, Cambridge, UK, 2005.